User Manual

homexpert™
by Honeywell

THR842DUK Wireless Digital Thermostat

50051983-001 Rev. A

WARNING: This product must be correctly installed and configured to work properly (see pages 12-23). If you are not experienced in wiring electrical equipment, we recommend professional installation to avoid possible personal injury or equipment damage.

TIP: After installation, see the QUICK START GUIDE on page 6 to customise and begin using your new thermostat right away.

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***NOTE:** This symbol will flash on the screen when battery power is low. Remove cover and replace batteries with two fresh AA alkaline batteries (see page 16).*

What is a room thermostat?

...an explanation for householders

A room thermostat simply switches the heating system on and off as necessary. It works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached. Turning a room thermostat to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the design of the heating system, for example, the size of boiler and radiators.

Neither does the setting affect how quickly the room cools down. Turning a room thermostat to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

The heating system will not work if a time switch or programmer has switched it off.

The way to set and use your room thermostat is to find the lowest temperature setting that you are comfortable with, and then leave it alone to do its job. The best way to do this is to set the room thermostat to a low temperature – say 18°C – and then turn it up by one degree each day until you are comfortable with the temperature. You won't have to adjust the thermostat further. Any adjustment above this setting will waste energy and cost you more money.

If your heating system is a boiler with radiators, there will usually be only one room thermostat to control the whole house. But you can have different temperatures in individual rooms by installing thermostatic radiator valves (TRVs) on individual radiators. If you don't have TRVs, you should choose a temperature that is reasonable for the whole house. If you do have TRVs, you can choose a slightly higher setting to make sure that even the coldest room is comfortable, then prevent any overheating in other rooms by adjusting the TRVs.

Room thermostats need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture. Nearby electric fires, televisions, wall or table lamps may prevent the thermostat from working properly.

About your new wireless thermostat

The THR842DUK is an easy-to-use thermostat designed to maintain a comfortable environment when you are at home and reduce energy costs when you are away. One touch of the ECO button overrides the normal temperature to maintain a lower, energy-saving level for a specified period of time (see page 11).

QUICK START GUIDE

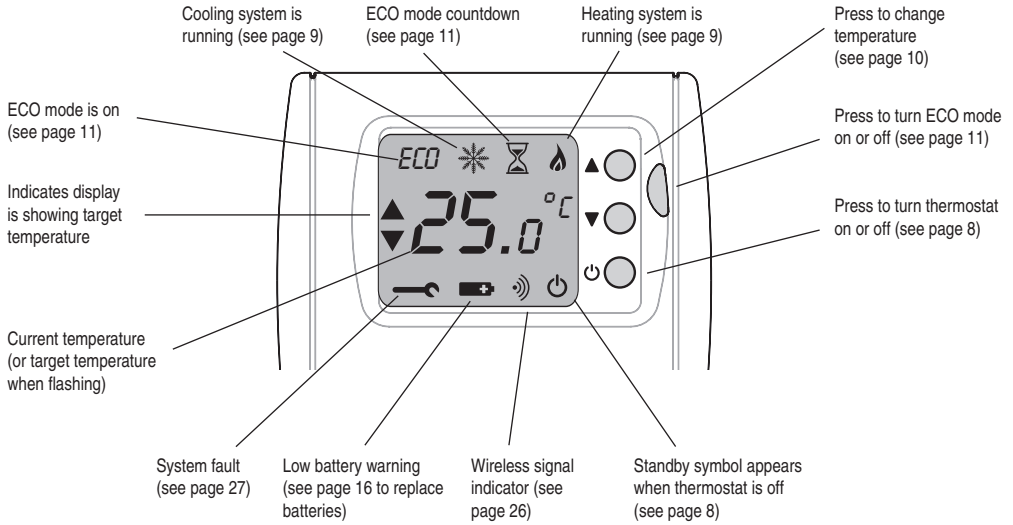
Your new thermostat is pre-programmed and ready to go. Just check the steps below and change settings if needed:

1 **Install and set up thermostat & relay box**
(if this has not been done by a professional installer)..... See pages 12-25

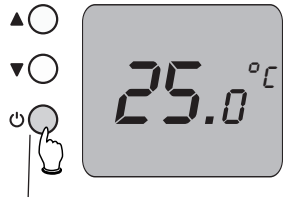
2 Select heating (default) or cooling mode..... See page 9

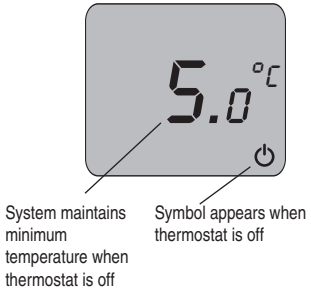
3 Set desired indoor temperature..... See page 10

Quick reference



On/off switch and frost protection

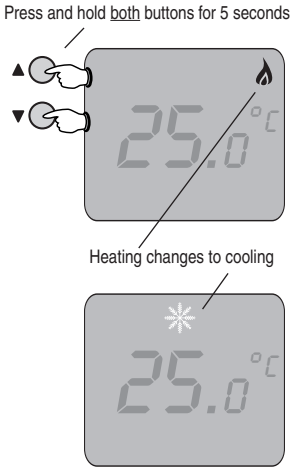




Press and hold the ***ON/OFF*** button as shown at left to turn the thermostat on or off. When off, the thermostat will never activate the cooling system, and will activate heating only if necessary to maintain a minimum indoor temperature of 5º C (frost protection).

You can change the frost protection temperature to any level between 5º and 16º C, or turn this feature off so the heating system is never activated when the thermostat is off (see page 23).

Heating or cooling control



The thermostat is pre-set to control only your heating system. If installed and set up correctly, it can also be used to control your cooling system.

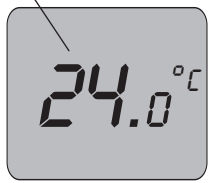
To switch between heating and cooling, press and hold the ▲ and ▼ buttons together until the screen changes.

NOTE: *The thermostat will not switch to cooling control unless you enable this feature (see page 23).*

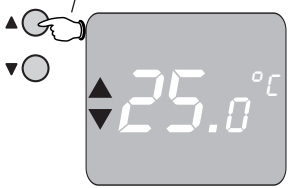
NOTE: *When you change the system, the "Heating" and "Cooling" symbols will appear for a few seconds, then disappear. Normally, these symbols appear only when the heating or cooling system is running.*

Temperature control

Current room temperature



Press buttons to display or change target temperature



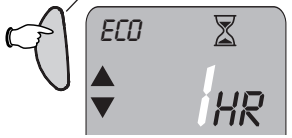
When idle, the thermostat displays the current room temperature. You can press the ▲ or ▼ buttons at any time to see the “target” temperature the thermostat is trying to maintain.

One button press will display the target temperature, flashing. To change it, press either button repeatedly, until the display shows the temperature you want. After a few seconds the display will stop flashing and change to show the current room temperature.

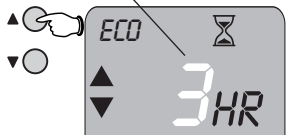
NOTE: *You can use the ECO mode to temporarily override the target temperature for a specified period of time (see page 11).*

Energy-saving ECO mode

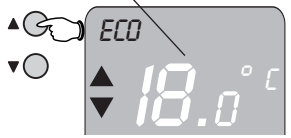
Press to enter ECO mode



Set number of hours



Change ECO temperature (if needed)



The ECO mode overrides thermostat settings to maintain a different temperature for 1 to 24 hours. This can be useful to reduce heating or cooling costs when you are away from home.

1 Press the green ***ECO*** button to display timer.

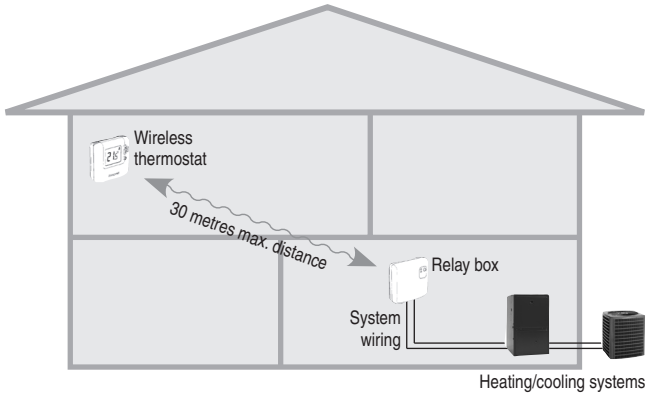
2 Press the ▲ or ▼ buttons to set timer (1-24 hours).

While in ECO mode, the screen will alternately display remaining time and current room temperature. After the timer expires, the thermostat will resume normal operation. Options:

- Press the ▲ or ▼ buttons to raise or lower the temporary ECO temperature if needed.
- Press the ***ECO*** button again to cancel ECO mode and resume normal operation.

NOTE: *The default ECO temperature is pre-set to 18º C. To raise or lower the default temperature, see page 23.*

System installation



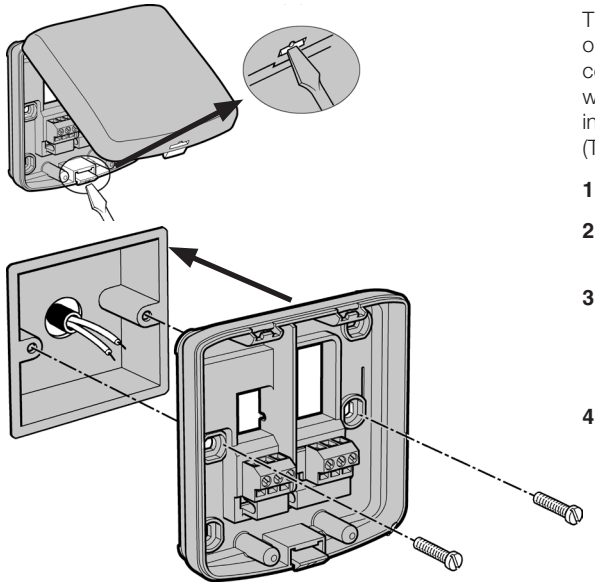
Installation procedure

1. Install relay box
2. Connect system wiring
3. Activate batteries and install wireless thermostat
4. Setup and test system operation

NOTE: *If you are not experienced in equipment installation, we recommend that these procedures be done by a professional installer.*

DISCONNECT ELECTRIC POWER BEFORE INSTALLATION: *Can cause electrical shock or equipment damage.*

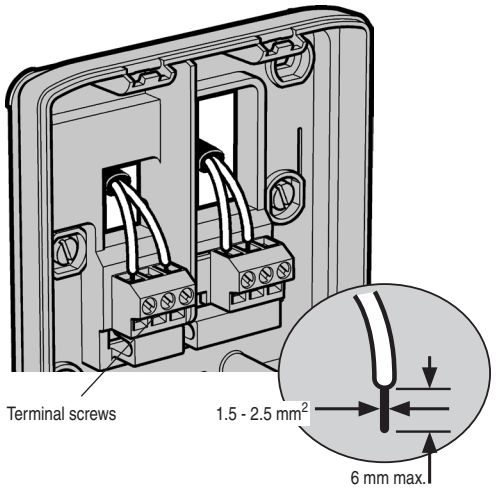
Install relay box



The relay box is wired directly to your heating or cooling equipment. The thermostat communicates with the relay box using a wireless RF signal to control the system. Do not install near metal objects or electronic devices (TV, sound system, PC, etc.).

1. **Make sure electrical power is off**.
2. Use a screwdriver to release latch and remove relay box cover.
3. Mount relay wall bracket as shown at left. Install at least 30 cm from any metal objects such as metal wall boxes and metal equipment enclosures.
4. Connect system wiring as shown on pages 14-15, then replace relay box cover.

Connect system wiring



Connect wiring from your heating or cooling equipment to the relay box as shown at left. See wiring diagrams on page 15 for details.

1 **Make sure electrical power is off**.

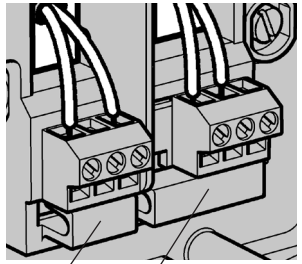
2 Strip insulation to expose about 6 mm of bare wire.

3 Use a screwdriver to loosen terminal screw, insert wire into slot, then tighten screw.

4 Replace relay box cover, then restore electrical power.

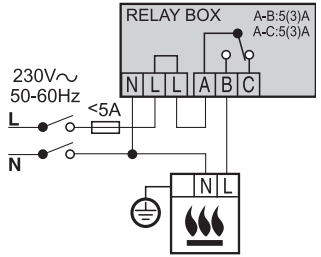
NOTE: *All wiring must comply with IEE regulations. Keep AC mains supply/load cables separate from equipment wiring.*

Wiring diagrams

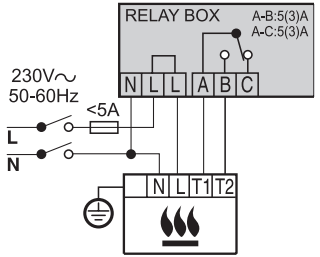


Wiring terminals

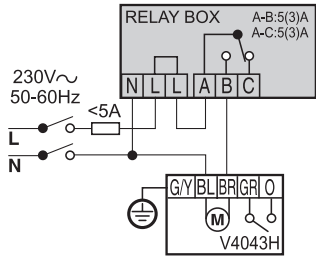
Burner (direct control)



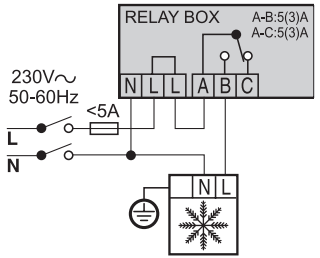
Combi boiler



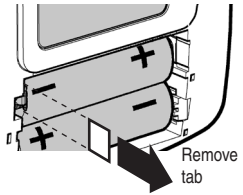
Zone valve



Cooling device

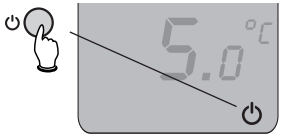


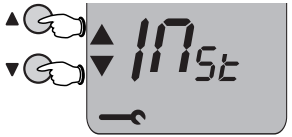
Activate batteries and test thermostat



Grasp and pull to remove the thermostat cover. Discard the plastic tab inside to activate the batteries, then test as shown below.

***NOTE:** This symbol will flash on the screen when battery power is low. Remove cover and replace batteries with two fresh AA alkaline batteries.*

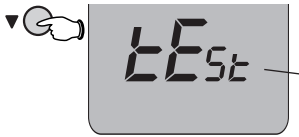




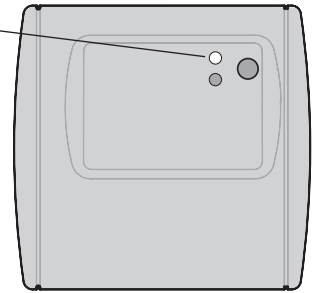
To test the thermostat:

1. Restore electrical power to the relay box.
2. Hold the thermostat 2-3 metres from the relay box.
3. Press and hold the ***ON/OFF*** button to turn off the thermostat.
4. Press and hold the ▲ and ▼ buttons together until the screen changes as shown at left.

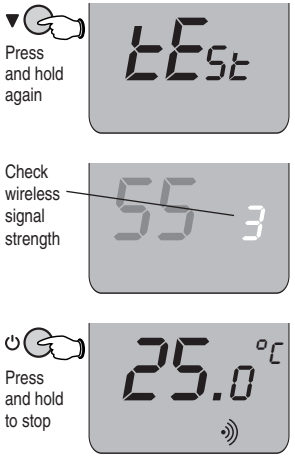
Test thermostat (continued from page 16)



5. Press the ▼ button once.
6. Press and hold the ▼ button until the screen displays TEST. If the green light on the relay box does not flash, the units are not “bound” together. See page 28 and follow the instructions to re-establish wireless communication.



Test thermostat location (continued from page 17)



Test signal strength to find a suitable location for the thermostat before installation.

While still in Test mode (see pages 16-17), press and hold the ▼ button until the screen changes as shown, then move the thermostat and check the screen display until you find a suitable location.

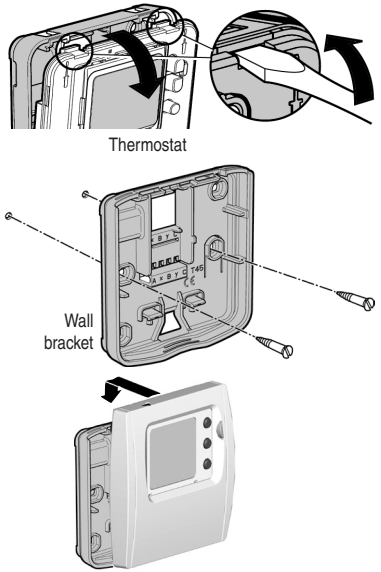
Signal strength:

0 — 2: No. Move the thermostat to another location.

3 — 5: Yes. Location is good.

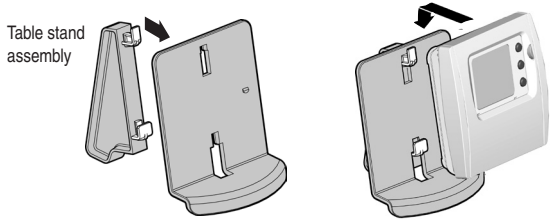
Press and hold the ***ON/OFF*** button to stop the test.

Install thermostat

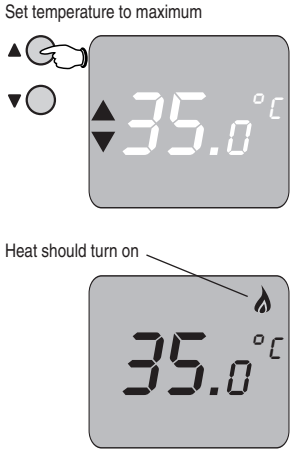


The wireless thermostat can be mounted in the table stand, or on a wall. For wall mounting, remove the thermostat cover and use a screwdriver to separate the thermostat from the wall bracket as shown at left. Install the wall bracket about 1.2 to 1.5 metres above the floor.

- Do not install near sources of hot or cold air (radiators, windows, heating or cooling ducts).
- Install at least 30 cm from metal objects.
- Install at least 1 metre away from other electronic devices (TV, sound system, PC, etc.).



System test



After installation, you should check to make sure the system is working properly.

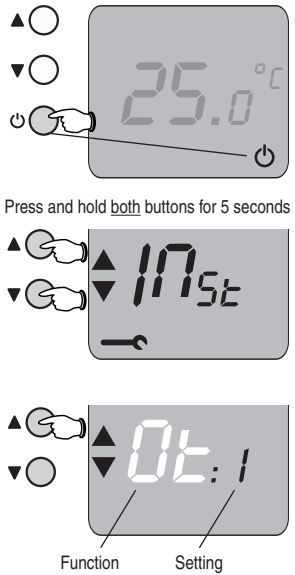
1 Check the power supply to make sure the system is on and the green light on the relay box is off.

2 Press the ▲ button to raise target temperature to maximum (35°C).

If the system is set up properly, the "heating" symbol should appear on the thermostat display, the heating system should begin running, and the green light on the relay box should be on.

3 To stop the test, press the ▼ button to lower the target temperature to an appropriate level. The heating system should turn off and the "heating" symbol on the thermostat screen should disappear.

Installer setup



Installer settings allow you to customise how your system works. Check the tables on pages 22-24 to see if any settings need to be changed.

To change installer settings:

1 Press and hold the ***ON/OFF*** button for 5 seconds.

2 Press and hold the ▲ and ▼ buttons together until the screen changes.

3 Press the ▲ or ▼ buttons to scroll through functions quickly until you find one you want to change (see list on pages 22-23).

4 To change any setting, press the ***ON/OFF*** button, then press the ▲ or ▼ buttons until the correct value is flashing.

5 Press ***OFF*** again to save your choice, then use the ▲ or ▼ buttons to select another function.

To exit installer setup, press and hold the ***ON/OFF*** button for 5 seconds.

Installer setup functions

** Factory default setting

Function	Description	Setting Options
1: Ot	Minimum boiler on/off time	1 minute ** Options: 1 to 5 minutes ***See page 24 for important information***
2: Cr	Cycles per hour (CPH)	6 cycles per hour ** Options: 3, 6, 9 or 12 ***See page 24 for important information***
3: Pb	Proportional band width	1.5°C ** Options: 1.5° to 3°C
4: tO	Temperature offset	0: No offset ** Options: +3° to -3°C
5: uL	Maximum temperature allowed	35°C ** Options: 21° to 35°C
6: LL	Minimum temperature allowed	5°C ** Options: 5° to 21°C

NOTE: *See descriptions of functions on page 23.*

Installer setup functions

Enter Installer Setup (see page 19), then press ▲ or ▼ for access to system settings

Function	Description	Setting Options
7: ES	ECO default temperature	18°C ** Options: 5° to 35°C
8: HC	Heating/Cooling options	0: No central cooling system installed ** 1: Allows switching between heating and cooling systems ***Thermostat cannot control cooling unless you select 1***
9: OS	Frost protection temperature	5°C ** Options: — (none) or 5° to 16°C
10: LC	Loss of communications instruction	0: Switch relay off ** 1: Operate relay 20% on / 80% off
11: FS	RESET TO FACTORY DEFAULT	0: No change 1: Select 1 to restore default settings. All customised settings will be lost.

NOTE: *See descriptions of functions on page 23.*

Customised settings for your system

Your heating system	Changes required	Setting Options
Standard gas boiler (<30kW)	None	No change
Zone Valve	None	No change
Oil boiler	Function 1: Ot Function 2: Cr	Set to 4 minutes Set to 3 CPH
Thermal actuator	Function 2: Cr	Set to 12 CPH
Electric heating	Function 2: Cr	Set to 12 CPH

Your cooling system	Changes required	Setting Options
Heat pump/air conditioner	Function 1: Ot Function 2: Cr Function 8: HC	Set to 4 minutes Set to 3 CPH Set to 1
Fan coil	Function 8: HC	Set to 1

***NOTE:** After changing the above settings to accommodate a cooling system, you can switch the thermostat to control either heating or cooling (see page 10).*

Description of functions

Ot **Minimum boiler off time**: Check proper setting for your system (see page 24).

Cr **Cycles per hour**: Check proper setting for your system (see page 24).

Pb **Proportional band width**: If your heating system is oversized for your home, you can compensate by increasing the width of the control proportional band up to 3°C.

tO **Temperature offset**: In some cases, the thermostat must be installed in a location that does not accurately control temperature for optimum comfort in other rooms. You can set the thermostat to compensate for this by adjusting the offset.

uL **Maximum temperature**: When the ▲ button is pressed, the thermostat will not allow a target temperature above the maximum you set.

LL **Minimum temperature**: When the ▼ button is pressed, the thermostat will not allow a target temperature lower than the minimum you set.

ES **ECO default temperature**: This is the default target temperature when the thermostat is in ECO mode (see page 11).

HC **Heating/cooling options**: When set to 1, the thermostat can control both heating and cooling systems (see page 9).

OS **Frost protection temperature**: Minimum temperature allowed when the thermostat is off (see page 8).

LC **Loss of communications**: Determines how the system operates if wireless signal is lost between thermostat and relay box.

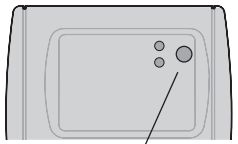
In case of difficulty

Thermostat screen is blank	• Make sure two fresh AA alkaline batteries are properly installed (see page 16).
Heating or cooling system does not respond	• Check thermostat batteries (see above). • Make sure heating and cooling systems have power. Check fuses and circuit breakers and replace or reset as needed. • Check wiring (pages 14-15) and system configuration (pages 21-25). • If red light on relay box is on, the thermostat and relay box may have lost communication with each other. Check for metal objects or other devices that may block or interfere with the wireless signal. Try the test procedures described on pages 16-20. • If above remedies cannot resolve the problem, the thermostat may have to be moved. Try a location closer to the relay box, or farther away from interference by metal objects or electronic devices such as televisions, sound systems, PCs, etc.

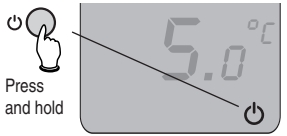
In case of difficulty

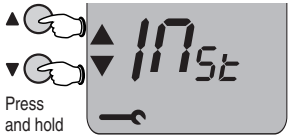
Desired temperature cannot be maintained	• If remedies described on page 26 cannot resolve the problem, the thermostat may have to be moved. Make sure it is not installed near sources of hot or cold air (radiators, windows, heating or cooling ducts).
	If this symbol flashes on the screen during normal operation, a fault has occurred. • Press the button on the relay box to illuminate the green light and temporarily restore system function. This is a manual override which will not correct the fault; it will only allow the system to provide heat until the fault is corrected. • If the problem cannot be corrected, contact Honeywell Customer Care for assistance (see back cover for contact information).

Re-binding procedure



Press and hold relay box button





If you must replace a wireless thermostat or relay box, the system will not work until both devices can communicate with each other. This is called binding. Follow the steps below to re-establish wireless communication.

1 Hold thermostat about 1 or 2 metres from the relay box, then press and hold the relay button for 15 seconds.

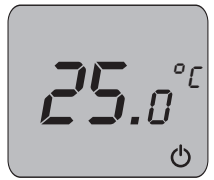
Note: After 5 seconds the red light flashing pattern will change, but you must hold down the button for at least 15 seconds to clear previous binding information from memory.

2 Release the relay button, then press and hold it again for 5 seconds, until the red light flashes evenly ("binding" mode).

3 Release the relay button, then press and hold the thermostat ***ON/OFF*** button to turn off the thermostat.

4 Press and hold the thermostat ▲ and ▼ buttons until the screen changes as shown at left.

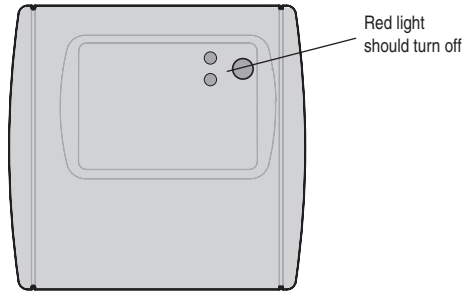
Re-binding procedure (continued from page 28)



5 Press the ▲ button repeatedly until the display shows "CLr." Then press the ***ON/OFF*** button to clear previous binding to other devices.

6 Press the ▲ button again to return to binding mode.

7 Press the ***ON/OFF*** button again to re-establish wireless communication with relay box. If successful, the red light on the relay box will turn off, and the thermostat will return to normal operation in Off mode a few seconds later.



Limited Warranty

Honeywell warrants this product for 1 year from date of purchase. We undertake to replace or repair at our discretion, products should they become defective within 1 year solely as a result of faulty materials and or workmanship.

Understandably if the product has not been installed or maintained in accordance with Honeywell's instructions, has not been used appropriately or if any attempt has been made to rectify, dismantle or alter the product in any way the warranty will be invalidated.

This product warranty states Honeywell's entire liability. It does not extend to cover consequential loss or damage or installation costs arising from a defective product.

If the product is defective, please return it together with a proof of purchase or receipt to the place of purchase.

This does not affect your statutory rights.

If you require further information about this product, call the homexpert™ by Honeywell technical helpline on 0845 604 2893.

For a full list of terms and conditions please visit www.homexpertbyhonyewell.com.

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Declarations, disposal and recycling

Declaration

Honeywell hereby declares that this wireless product is in compliance with the essential requirements and other relevant provisions of the Radio and Telecommunications Terminal Equipment (R&TTE) directive, 1999/5/EC.

Disposal and recycling

Batteries and waste electrical products should not be disposed of with household waste. Please recycle where these facilities exist. Check with your local authority or retailer for recycling advice.

Please retain these instructions for future reference.

Need Help?

For assistance with this product please visit **www.homexpertbyhoneywell.com**, or call Honeywell Customer Care at 0845 604 2893.

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Honeywell
The Arnold Centre
Paycocke Road
Basildon, Essex
SS14 3EA
Technical Help Desk: 0845 604 2893
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